

species where more than one is described. There is a brief account of each species giving the general characters, habitat, distribution, and the character and uses of the wood. All of the native trees of the Northeastern United States and most of these commonly cultivated for ornament or fruit are included. The nomenclature is that of the second edition of Britton and Brown. A single common name is given for each species, though a few others are to be found in the index. The use of synonyms and of several common names would have added to the value of the book, especially where a tree is known by different names in different regions. There is a glossary and a complete index. The introduction attempts in six pages to give an outline of all the activities of the growing tree from the absorption of water to the development of seed. The book easily fits in the coat pocket. It is well bound in semi-flexible dark blue cloth and printed on good quality paper. It will be helpful to all who wish to know the trees, especially as it can be used at all seasons of the year.

GEORGE T. HASTINGS.

## PROCEEDINGS OF THE CLUB

MINUTES OF THE MEETING OF APRIL 28, 1926

This meeting was held at the Museum Building of the New York Botanical Garden with Vice President Barnhart in the Chair. The following were elected to membership in the Club:

Prof. Oakes Ames, North Easton, Mass.

Mr. E. J. Schreiner, New York Botanical Garden.

Mr. F. A. Varrelman, American University Campus, Washington, D. C.

Mrs. Britton read a part of a communication from the Committee on the Preservation of Natural Conditions of the Ecological Society of America, in which it was suggested that the societies affiliated with it contribute \$1.00 to pay for the correspondence involved in circularizing matters relating to the preservation of natural features in the United States. By vote of the Club this sum was appropriated.

The scientific part of the program consisted of a talk by Dr. Arthur Hollick entitled "Recent discoveries of fossil plants

in Porto Rico." In 1915 Hubbard and Reed visited Porto Rico in connection with a scientific survey of the Island. They collected fossil plants in the ravine of the Collazo River. Dr. Hollick described 19 species from the material sent him at that time. In 1924 a collection was sent to the New York Botanical Garden by Senor Narciso Rabell, the owner of the region. This year about 300 specimens were collected by Dr. Hollick, of which perhaps 150 may be new species. The fossils were found in layers of clay and in clay shales, which hardened on exposure to the air. The specimens, as soon as brought to headquarters, were saturated with a solution of paraffin dissolved in benzole, which held the matrix together. They are probably of Eocene age, and represent land flora, but invertebrate remains, possibly of marine or brackish water origin, occur associated with them. They are earlier than those discovered in the Island of Trinidad, which latter are probably of Miocene age.

One specimen resembled a fragment of a fascicle of needles of a *Pinus*, another was evidently a fragment of a *Cycad*. Fragments of a fern and what appeared to be a fucoid plant were shown. A few monocotyledons were represented. All the rest were dicotyledons.

Dr. Britton remarked that *Pinus* does not now occur in Porto Rico. But since there are large forests of pines in Hispaniola it is not impossible that *Pinus* existed in Porto Rico in ancient times. There are three species of pine in Cuba and one in the Bahamas.

ARTHUR H. GRAVES,  
*Secretary.*

#### MINUTES OF THE MEETING OF MAY 11, 1926

This meeting was held at the American Museum of Natural History. Dr. Arthur P. Kelley of Rutgers University addressed the Club on "Similarity in plant associations and the causal factors."

Dr. Kelley said that every landscape has a definite appearance or physiognomy which is conditioned by certain factors. These include soil factors, presence or absence of vegetation, height and density of vegetation when present, its color, seasonal aspect, and development of the principal species.

Plant associations in various habitats and in different parts of North America may be compared, as aquatic, marsh, meadow, forest and alpine associations. Identity in genera is evident because of the past history of the region; similarity in aspect is evident where conditions of growth are comparable, and as these conditions vary then the associations vary. Slides were shown of plant associations of similar appearance in Pennsylvania and the Rockies; in the Arizona desert and in an African desert, etc.

ARTHUR H. GRAVES,  
*Secretary.*

#### MINUTES OF THE MEETING OF MAY 26, 1926

This was a joint meeting of the Torrey Botanical Club, the Wild Flower Preservation Society, the New York Bird and Tree Club, the American Fern Society, and the Federated Garden Clubs of New York State. The attendance was about 100. Dr. C. Stuart Gager, Vice President of the Torrey Botanical Club, occupied the chair. In the preliminary business meeting the following candidates were elected to membership in the Torrey Botanical Club.

Mr. Illo Hein, Schermerhorn Hall, Columbia University, New York City.

Miss H. Crane, 1 West 102 Street, New York City.

The subject of the meeting was the conservation of the native wild plants, and the following discussed various phases.

Mr. Raymond H. Torrey was the first speaker, his topic being "Outing clubs and the survival and protection of harried flowers." He said that while a great deal of carelessness and thoughtlessness still exists in the matter of picking wild flowers, he believes that the increase of outing clubs during the last 10 years has had a considerable salutary effect. Many clubs make the conservation of wild flowers part of their definite program. For example, when particular flowers needing protection are in bloom, attention is called to them. One Paterson club sets apart each Sunday in the spring for the study and observation of a particular flower.

The next speaker was Mr. J. Otis Swift, Nature Editor of the New York World, and leader of the "Yosians," whose

topic was "Walking clubs and wild flower conservation." Mr. Swift spoke of the "Yosian" brotherhood in particular. He said that it is estimated that 50,000 New Yorkers walk out of the City on Saturdays and Sundays to get their feet on the ground and come closer to wild life. A great portion of these people are city-bred, and have for the most part no appreciation of the protection of wild life. The Yosian brotherhood has some 4500 members, which grew from a small beginning of 200 members. They hail from all over the Union—from every state, there being from 30 to 40 from California, but the great majority are from New York City and surroundings. If these people go out into the country with leaders who will give them some idea of nature, and definite instruction, it will do them much good. For from 250 to 350 people who walk through the woods they have from 12 to 20 nature teachers stationed along the line. They go ahead of a little group and talk through a megaphone, telling of the trees, plants, birds, geography, and other things all along the way. The fact that some wild flowers need protection is emphasized. Mr. Swift suggested that like the well known Society of Seed Scatterers, the New York outing clubs make it part of their program to scatter seeds of both cultivated and wild flowers along the roadsides; also, that the clubs bring back and plant in the public parks different kinds of wild flowers. He believed that a great deal could be done in the way of planting seeds of nut trees along the roadways.

Dr. R. C. Benedict's topic was "Saving the Hart's Tongue Fern." This fern is rather unusual because of its long, slender leaf. It is so rare that no dealer in wild flowers offers it for sale. There are only a few places in North America where it is found. Near Jamesville, N. Y. it grows on a limestone formation, on high ridges in shaded places, and here the problem of saving it is a critical one. There are two stations for the plant here. One has already been saved. It is part of the Clark Reservoir belonging to the State, but it is the smaller of the two and does not harbor as many specimens as does that which is now controlled by the Solvay Process Company, makers of baking soda. This larger station cannot all be saved, but Dr. Benedict hopes that the Company might be persuaded to leave the south and east sides of it untouched. Plants of the Hart's Tongue grown from spores have been raised at the Brooklyn Botanic Garden.

This might be done elsewhere and the sporelings planted on limestone ledges, in cool, shady, moist soil. Experimental studies of many rare ferns show that they may be grown easily. Educational propaganda through the newspapers, leaflets, pamphlets, etc., to promote a general wide-spread interest in the problem, will help to save this rare plant from annihilation.

Mr. Henry Hicks of Hicks Nurseries was the last speaker, his title being "What private landowners can do to promote wild flower conservation." Mr. Hicks stated that fires of one sort or another have been in the past, and are now, responsible for the loss of a large part of our wild flowers. He outlined methods of fire prevention. In the promotion of the cultivation of our native wild plants, landscape architects have been an important factor in recent years, since they have created a demand for these plants, and have encouraged the nurseries to grow them. Private landowners can help in two ways; first by asking the nurserymen for wild plants, and second by furnishing the nurserymen with seeds or plants for propagation. As to laws prohibiting the gathering of wild plants, Mr. Hicks felt that there are many sides to the question. These should be carefully considered before laws are enacted. In the case of state and federal lands it may be feasible to grant special permits to nurserymen and botanists, limiting the number of plants to be collected by any one person, and specifying a certain distance from roads and trails within which they must not be collected. We must also learn the best methods of growing our own wild flowers.

ARTHUR H. GRAVES,  
*Secretary.*

#### MEETING OF OCTOBER 12, 1926

The meeting was called to order at Barnard College with President Richards in the chair. The following were elected to membership in the club:

Mr. J. Ashton Allis, Grace National Bank, 7 Hanover Square, New York City.

Miss Norma Loeb, 328 West 83rd Street, New York City.

Mrs. Walter Rautenstrauch, 235 Dorin Court Road, Palisade, N. J.



The secretary reported with regret the deaths of three members:

Dr. W. E. Wheelock, of N. Y. City, who died on February 3rd; Dr. George N. Best, of Rosemont, N. J., June 18; and Dr. C. D. Fretz, of Sellersville, Pennsylvania, August 17.

The Secretary, as delegate for the Torrey Club to the International Congress of Plant Sciences at Ithaca, August 9-14, 1926, made a brief general report on the meeting.

Of those who spoke on their experiences and work of the summer, Dr. Harper remarked upon the study of elaioplasts going forward in his laboratory. An effort is being made to ascertain if these structures may not arise in the cell *de novo*. It has been generally believed that living structures in the cell must arise by division, and so if elaioplasts can be found to arise *de novo*, the discovery will have large significance. Miss Nicholson reported on the interesting Forestry Exhibit at the Sesquicentennial Exhibition. The Wild Flower Preservation Society also had an attractive booth, lists of those plants which should be conserved, and those which may be picked, having a prominent place.

In the town of Tully, New York, visited this year by Mr. Hastings, he found six patches of the rare *Asplenium angustifolium*. Formerly there was only a single patch. The Walking Léaf Fern is still found on the same ledge where it has been growing for many years, but other rare ferns, as well as the Purple Fringed Orchis, have disappeared from places where they formerly grew. Elodea, in Tully Lake, increased in abundance for many years, but has now gone back to its former condition of comparative scarcity. Dr. Hazen reported that both *Cabomba caroliniana* and the long leaved species of Elodea are now found in Van Cortlandt Park, perhaps planted there by some one interested in the culture of water plants. Mr. Hein remarked that this is a very good year for powdery mildews. Dr. Richards spoke of the great success of the Sterility Conference in N. Y., August 13 and 14. This, the 4th conference, was held under the auspices of the Horticultural Society of N. Y. The proceedings will be published.

ARTHUR H. GRAVES,  
Secretary.